
Progress Report

November 29, 2006 – December 5, 2006

Team: Interpenetrating networks for delivery systems

Team Members: Ashley Huth- Team Leader
Max Michalski- BWIG
Claire Flanagan- Communicator
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Client: Professor John Kao
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Problem Statement:

Interpenetrating networks are a type of biomaterials that polymerize in situ and have been used in drug delivery, wound healing, and tissue engineering applications. This design project involves the development of novel delivery mechanisms that should be clinically easy to use with improved storage life.

This Week's Goals:

- Finish poster for presentation
- Met with Professor Kao
- Prepare for presentation
 - Make IPN sample
 - Create spray bottle
 - Measure out materials for demo
- Give poster presentation
- Start paper
- Do final tests

Summary of Accomplishments:

- Begin to prepare poster presentation
- Testing
 - Monitored the composition of a 90-110 gelatin in citrate buffer solution over time
 - After 5 minutes there was still a lot of gelatin granules in the solution.
 - After 10 minutes the granules appeared swelled.
 - After 15 minutes there was little change from 10 minutes.
 - Did multiple replicates of 2 grams 90-110 gelatin in 20mL of citrate buffer (no sitting time)
 - Monitored curing time
 - All curing times were between 3 to 4 minutes

- After curing for 3 to 4 minutes minimal sol fraction was seen
- Sol fraction decreased after allowing to cure for an extended period of time
- Tested different spray pumps
 - As hypothesized, larger diameter straws and the notch at the bottom of the straw allowed for the most even spraying

Activities:

Team: Meeting this week, initial work on poster for presentation, testing (10 hr)

Ashley: Wrote progress report, basic research, (2 hr)

Adam: Basic research (2 hr)

Claire: Basic research (2 hr)

Max: Basic research, updated website (2 hr)

Total time this week: 18 hrs

Cumulative Time: 176hrs

Project Timeline:

Task	September				October				November				December		
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15
Design															
Design Brainstorming															
Preliminary Design															
Wednesday Team Meeting															
Research															
Deliverables															
Progress Report															
PDS															
Mid Semester Paper															
Mid Semester Presentation															
End Semester Presentation															
End Semester Paper															
Meetings															
Client															
Advisor															
Other															
Website															
BSAC															

	Done	Goal
All		
Adam		
Ashley		
Claire		
Max		